## SEQUENCE LISTING

<110> NIKOLICH, MIKELJON HOOVER, DAVID

5 <120> IMMUNOGENIC COMPOSITIONS INCLUDING ROUGH PHENOTYPE BRUCELLA HOST STRAINS AND COMPLEMENTATION DNA FRAGMENTS

<130> ARMY 176

10 <140> NOT KNOWN

<141> 2003-12-11

<150> US 60/402,164

15 US 60/533,016

<151> 2002-12-12

2003-09-15

20 <160>2

<210> SEQ ID NO 1

<211> LENGTH: 2693

25 <212> TYPE: DNA

<213> ORGANISM: Brucella melitensis

<220> FEATURE:

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<210> SEQ ID NO 2

<211> LENGTH: 410

<212> TYPE: PRT

20 <213> ORGANISM: Brucella melitensis

<400> SEQUENCE: 2

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5

10

Pro Ala Lys Tyr Arg Gly Gly Ser Leu Arg

25 15 20

Val Thr Lys Asn Ile Val Arg Met Leu Leu

25 30

Lys Gly Ser Gln Asn Tyr Gly Glu Gln Cys Gln Val Arg Leu Ala Val Arg Ala Asp Thr 45. Tyr Asp Ile Gly Glu Glu Phe Arg Asp Leu Ile Asp Asn Gly Val Glu Val Arg Glu Ile Ser Phe Lys Glu Val Pro Pro Glu Asp Val Asn Asn Ala Asn Tyr Phe Gln Gly Arg Asn Ile Asp Leu Gln Ser Arg Thr Tyr Trp Leu Met Glu Asp Gly Gln Asn Asn Cys Ala Asp Ser Asp Leu Trp Leu Val Val Ser Tyr Ser Val Glu Tyr Pro Ile Ala Pro Ile Arg Pro Thr Leu Ile Phe Ala Thr Asp Phe Ile Gln Arg Tyr Val Pro Asp Ile Ile Trp Pro Pro Arg Pro Gly Glu Gly Asp Ala Glu Ala Leu 

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	Ala Thr Thr Pro His Thr Arg Leu Asp Ala		
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5	lle Ser Tyr Ala Gly Leu Pro Ala Ser Lys		
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	Val Tyr Leu Ala Pro Met Glu Phe A	sp Pro	
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	225	230	
15	Lys Ala Phe Gln Ala Leu Asp Leu 7	yr Tyr	
	235	240	
	Gly Lys Leu Lys Gly Lys Ile Lys Th	ır Lys	
	245	250	
	Ile Val Gly Val Ser Ser Val Arg Me	t Asp	
20	255	260	
	Pro Ser His Arg Trp Gln Ala Lys Ty	r Glu	
	265	270	
	Asn Lys Ala Tyr Val Lys Ser Val Ar	rg Glu	
	275	280	
25	Ile Val Ala Gly Leu Asp Asn Leu Ly	s Ser	
	285	290	
	Asn Val Glu Phe Ala Gly Glu Val A	la Asp	

295 300

Lys Glu Tyr Ala Glu Leu Leu Ala Ser Ala

305 310

Cys Phe Leu Trp His Pro Thr Leu Ala Asp

5 315 320

Asn Gly Thr Phe Ala Ala Val Glu Ala Ala

325 330

Tyr Met Gly Cys Pro Thr Leu Ser Asn Asp

335 340

10 Tyr Pro Gln Met Arg Tyr Ile Ser Asn Arg

345 350

Phe Glu Ile Pro Met Gln Tyr Phe Asn Ala

355 366

Arg Ser Val Lys Glu Met Ala Ser Ala Leu

15 365 370

Lys Gln Met Glu Glu Thr Pro Ile Asp Val

375 380

Gly Leu Leu Pro Ser Arg glu Thr Leu Ser

385 390

20 Leu His Ser Trp Glu Ala His Ala Ser Glu

395 400

Tyr Trp Asp Val Ile Val Arg Ala Ala Ala

405 410

25